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Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

Claim 1. [previously presented] A method for producing a flexible and low density cross-linking gel for connecting optical fibers having a refractive index, said method comprising: adjusting the refractive index of a flexible silicone gel material to be that generally equal to the refractive index of said optical fibers to be connected, and a reaction step for causing the flexible silicone gel material adjusted in said adjusting step by cross-linking said silicone gel material to an extent such that a gel having a low degree of cross-linking is produced for closely adhering to optical fibers; and wherein said adjusting step and said reaction step are carried out in a clean room.

Claim 2. [canceled]

Claim 3. [canceled]

Claim 4. [canceled]

Claim 5. [canceled]

Claim 6. [canceled]

Claim 7. [currently amended] A method for producing a low cross-linking density gel used for connecting and for adhering to optical fibers, said method comprising adjusting the refractive index of a flexible silicone gel material to that of said optical fibers to be connected, synthesizing a composition by adding a cross-linking agent to said adjustable flexible silicone gel material; filling a syringe with said composition; sealing said syringe; and heating said sealed syringe to cause said composition to undergo an addition reaction [in a binding

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region where cross-linking density is low,] thereby producing a low cross-linking density gel in said syringe allowing close adherence to said optical fibers.

Claim 8. [previously presented] A method according to claim 7, wherein the syringe is sealed by mounting a cap in the sealing step.

Claim 9. [previously presented] A method according to claim 8, wherein the syringe is mounted in a dispenser for dispensing a predetermined amount of the low cross-linking-density gel by replacing the cap mounted on the syringe by a nozzle after the low cross-linking-density gel is produced in the syringe.

Claim 10. [withdrawn] A low cross-linking density gel used for connecting optical fibers, said gel being characterized in that it is produced by adjusting a flexible silicone gel material so that said material has a predetermined refractive index generally identical to that of the refractive index of said optical fibers to be connected and further subjecting said gel to an addition reaction with the addition of a cross-linking agent so that said gel will cross-link in a binding region where cross-linking density is low.

Claim 11. [withdrawn] A low cross-linking density gel according to claim 10, wherein the specified refractive index is set substantially equal to the refractive index of cores of optical fibers to be connected.

Claim 12. [withdrawn] A low cross-linking-density gel according to claim 10, wherein the flexible silicone gel material is a polyorganosiloxane having vinyl groups at its ends.

Claim 13. [withdrawn] A low cross-linking-density gel according to claim 10, wherein a cross-linking agent is added prior to the cross-linking reaction and the addition reaction takes place in the presence of a platinum catalyst.

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Claim 14. [withdrawn] A low cross-linking-density gel according to claim 13, wherein the cross-linking-agent is polyorganosiloxane having covalently bound hydrogen atoms.

Claim 15. [withdrawn] A low cross-linking density gel according to claim 13, wherein the composition after being filled in the syringe is caused to undergo the addition reaction by being heated during the cross-linking reaction.

Claim 16. [withdrawn] A low cross-linking-density gel according to claim 10, wherein the low cross-linking-density gel is produced in a clean room.